

stage renal disease, and anti-HCV-positive patients underwent transplantation in a significantly lesser proportion than anti-HCV-negative patients (50% vs. 70%). The different rate of renal transplantation may have biased the result on mortality, because life expectancy is better in transplanted patients than in patients continuing dialysis. In addition, in Pereira's study the major death risk factor in HCV-positive patients was infection, rather than liver disease. Espinosa et al agree with us that histological lesions of the liver are mild and that liver disease shows particular characteristics in HCV-positive patients undergoing hemodialysis. In other words, they admit that the disease is "more benign." However, our observation that the extent of histological liver damage is mild in patients on dialysis after a 4-year seroconversion period does not imply that the disease is "absolutely benign" and that liver damage cannot undergo further progression.

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## Diagnosing sickle cell disease

**To the Editor:** I read with interest the recent review article by Pham et al about the renal abnormalities in sickle cell disease [1]. In describing hematuria caused by this condition, however, the authors missed a point which in my opinion is important. In fact, they did not mention that sickled erythrocytes can be found in the urine of patients with sickle cell disease, a finding which can be of diagnostic importance. This fact has been stressed in a recent paper, which described how the diagnosis of sickle cell disease can be suggested by the finding in the urinary sediment of sickled erythrocytes [2], and has also been reported in other studies [3–7].

Besides the case described [2], I have seen urinary sickled erythrocytes again recently, while examining the urinary sediments at the Hospital of St. Jean de Dieu of Afagnan,

Togo (West Africa), where S-hemoglobins represent more than 60% of all hemoglobins investigated by electrophoresis. The urinary sediment of a 25-year-old black woman, hospitalized for a complicated pregnancy, contained 20 to 25 erythrocytes per high power field (400×), several of which were clearly sickled. The presence of a sickle cell disease was confirmed by the Emmel test, which showed a 100% sickling of the peripheral erythrocytes after their incubation for 30 minutes with soda metabisulphite.

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## Reply from the authors

The urinary findings described in our paper pertain to patients who carry the diagnosis of sickle cell disease. Hematuria is one of the renal abnormalities seen in sickle cell disease.

We did not describe the red blood cell morphology because it is not always the same. Depending on where red blood cells enter the genital urinary tract and the status of the sickle cell disease, the red blood cell morphology may run the spectrum from normal to dysmorphic to sickle cell shaped.

We do not disagree that the presence of urinary sickle cell-shaped red blood cells may be seen in patients with sickle cell disease. However, the diagnosis of sickle cell disease is generally made by hemoglobin electrophoresis. This latter point was noted in references [2–4] quoted in the letter to the editor.

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